## **CALIFORNIA**

## **Science and Engineering Profile**

|                                     | California | U.S.        | Rank |  | California | U.S.            | Rank |
|-------------------------------------|------------|-------------|------|--|------------|-----------------|------|
|                                     |            |             |      |  |            |                 |      |
| Doctoral scientists, 1993           | 54,713     | 430,332     | 1    | Total R&D performance, 1993 (millions)   | \$33,721   | \$161,427       | 1    |
| Doctoral engineers, 1993            | 13,424     | 81,293      | 1    | Industry R&D, 1993 (millions)            | \$26,541   | \$117,622       | 1    |
| S&E doctorates awarded, 1995        | 3,653      | 26,482      | 1    | Academic R&D, 1994 (millions)            | \$2,464    | \$20,573        | 1    |
| ·                                   | 22%        | 23%         | '    | of which, in life sciences               | 58%        | \$20,573<br>55% | '    |
| of which, in engineering            |            |             |      | . ,                                      |            |                 |      |
| in life sciences                    | 19%        | 24%         |      | in engineering                           | 13%        | 16%             |      |
| in psychology                       | 19%        | 13%         |      | in physical sciences                     | 12%        | 10%             |      |
| S&E postdoctorates, 1994            |            |             |      | Higher education current-fund            |            |                 |      |
| in doctorate-granting institutions  | 6,248      | 36,143      | 1    | expenditures, 1993 (millions)            | \$19,709   | \$163,994       | 1    |
| S&E graduate students, 1994         |            |             |      | Number of SBIR awards, 1990-94           | 4.175      | 18.023          | 1    |
| in doctorate-granting institutions  | 44,778     | 438,694     | 1    | Patents issued to state residents, 1995  | 9,263      | 55,717          | 1    |
|                                     |            |             |      |  |            |                 |      |
| Population, 1995 (000s)             | 31,589     | 262,755     | 1    | Gross state product, 1992 (billions)     | \$787.9    | \$5,994.1       | 1    |
| Civilian labor force, 1995 (000s)   | 15,415     | 132,281     | 1    | of which, agriculture                    | 2%         | 2%              |      |
|                                     |            |             |      | manufacturing, mining, construction      | 19%        | 23%             |      |
| Personal income per capita, 1995    | \$23,699   | \$22,788    | 13   | transportation, communication, utilities | 7%         | 9%              |      |
|                                     |            |             |      | wholesale and retail trade               | 16%        | 16%             |      |
| Federal spending                    |            |             |      | finance, insurance, real estate          | 21%        | 18%             |      |
| Total expenditures, 1995 (millions) | \$152,534  | \$1,326,294 | 1    | services                                 | 23%        | 20%             |      |
| R&D obligations, 1994 (millions)    | \$11,280   | \$65,654    | 1    | government                               | 12%        | 12%             |      |
|                                     |            |             |      |  |            |                 |      |

Rankings and totals are based on data for the 50 States and D.C. Data on S&E postdoctorates and S&E graduate students include health fields.

## Federal Obligations for Research and Development in California by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

|  | Total      | Federal<br>intramural | All<br>FFRDCs | Industrial<br>firms | Universities & colleges | Other nonprofits | State & local government | State rank |
|--|------------|-----------------------|---------------|---------------------|-------------------------|------------------|--------------------------|------------|
| Total, all agencies                    | 11,279,888 | 1,400,726             | 1,791,580     | 6,046,504           | 1,659,223               | 354,290          | 27,565                   | 1          |
| Department of Agriculture              | 79,673     | 56,659                | 0             | 320                 | 22,219                  | 475              | 0                        | 3          |
| Department of Commerce                 | 36,871     | 15,534                | 285           | 10,406              | 10,435                  | 63               | 148                      | 7          |
| Department of Defense                  | 6,597,594  | 1,216,765             | 222,094       | 4,845,100           | 272,854                 | 40,781           | 0                        | 1          |
| Department of Energy                   | 1,012,937  | 15,397                | 778,438       | 114,309             | 88,150                  | 16,643           | 0                        | 2          |
| Dept. of Health & Human Services       | 1,210,119  | 1,191                 | 25,379        | 41,992              | 868,164                 | 261,351          | 12,042                   | 2          |
| Department of the Interior             | 49,720     | 42,174                | 140           | 1,224               | 5,775                   | 42               | 365                      | 3          |
| Department of Transportation           | 31,395     | 7,923                 | 111           | 7,797               | 1,345                   | 800              | 13,419                   | 6          |
| <b>Environmental Protection Agency</b> | 15,035     | 0                     | 0             | 9,050               | 4,717                   | 0                | 1,268                    | 7          |
| Nat'l Aeronautics & Space Admin.       | 1,962,011  | 45,083                | 764,789       | 983,870             | 151,572                 | 16,622           | 75                       | 1          |
| National Science Foundation            | 284,533    | 0                     | 344           | 32,436              | 233,992                 | 17,513           | 248                      | 1          |
|  |            |                       |               |                     |                         |                  |                          |            |
| State rank                             | 1          | 3                     | 1             | 1                   | 1                       | 2                | 2                        |            |

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable